

REMARKS

Claims 1-48 are pending in the application. Of the claims, Claims 1, 35, 42, 45, 46, 47 and 48 are independent claims. Claims 1-2, 6, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Yourlo (U.S. Patent No. 6,201,176). Claims 3-5, 7-13, 17-32, 35-36, and 39-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yourlo in view of Hoory et al. (U.S. Patent No. 6,678,655.) Claims 14-15, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yourlo in view of Hoory as applied to claims 3-5, 7-13, 17-32, 35-36, and 39-48 above, and further in view of Walker et al. (U.S. Patent No. 6,710,822.) Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yourlo in view of Hoory as applied to claims 3-5, 7-13, 17-32, 35-36, and 39-48 above, and further in view of Bloom et al. (U.S. Patent No. 4,591,928.) Those rejections are respectfully traversed and reconsideration is requested.

Turning to the cited prior art, Yourlo discusses a method for identifying and retrieving particular pieces of music or attributes of a desired piece of music from a music database on the basis of a query composed of desired features and conditional statements. Pieces of music are classified based on extracted features (properties) of the piece of music and stored in a database for future retrieval. The result of a query outputs the piece of music and/or the music identifiers associated with the desired piece of music.

Cited prior art, Hoory discusses a digitized speech signal encoder for compressing a digitized speech signal. (*See Abstract.*)

Cited prior art, Walker discusses an image processing apparatus for measuring similarities between different video data (including image and voice data).

Cited prior art, Bloom is directed to a post-synchronizing technique, that is, replacing dialog in a movie soundtrack that is recorded live at the time of shooting the movie with dialog recorded later in a studio.

Regarding Rejections under 35 U.S.C. 102(e)

Claims 1-2, 6, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Yourlo (U.S. Patent No. 6,201,176).

Yourlo does not teach or suggest at least the Applicants' claimed "forming (i) a spectral representation from the corresponding audio file" as recited in base claim 1. Yourlo merely extracts features (properties) from the audio such as, tempo, loudness, pitch, timbre (sharpness and percussivity). (*See* Fig. 15, step 1502 (feature retrieval).) The extraction of features of the audio does not teach or suggest forming a spectral representation from the audio.

Therefore, Yourlo does not teach or suggest "for a given musical work of interest: (a) comparing its spectral representation to the spectral representations of the musical works in the plurality" as claimed in base claim 1. Yourlo merely describes the use of spectral components to extract the percussivity property. (*See* col. 2, lines 29-43.) Furthermore, Yourlo does not teach or suggest the claim element of "summing including respective weighting of results of the comparisons in (a) and (b), said summed results providing an indication of which musical works in the plurality are similar to the given musical work of interest." Yourlo merely discusses using the extracted features of the audio to provide an indication of similarity. (*See* col. 12, line 44 – col. 13, line 37; Figs. 18-21.)

Claims 2, 6 and 16 are dependent on Claim 1. Thus, Claims 2, 6 and 16 are novel over the cited prior art for the same reasons discussed above for independent claim 1.

As such the § 102(e) rejection of Claims 1-2, 6, and 16 is believed to be overcome.

Regarding Rejections under 35 U.S.C. 103(a)

Claims 3-5,7-13, 17-32, 35-36, and 39-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yourlo in view of Hoory et al. (U.S. Patent No. 6,678,655.) Claims 14-15, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yourlo in view of Hoory as applied to claims 3-5, 7-13, 17-32, 35-36, and 39-48 above, and further in view of Walker et al. (U.S. Patent No. 6,710,822.) Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yourlo in view of Hoory as applied to claims 3-5, 7-13, 17-32, 35-36, and 39-48 above, and further in view of Bloom et al. (U.S. Patent No. 4,591,928.)

Applicants note that although independent claims 35 and 45-48 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Yourlo in view of Hoory, the support for this rejection is based on the teachings of Yourlo alone.

Independent claim 35 recites a like distinction in terms of a method and thus similarly patently distinguishes over the prior art for the same reasons already discussed for independent claim 1. Hoory does not add to Yourlo (a) the forming of a spectral representation, (b) the comparing of spectral representations, and (c) the summing of weighted comparison results argued above in Claim 1. Claims 36 and 39-41 are directly or indirectly dependent on base claim 35 and thus include these operable distinctions and limitation, over the prior art.

Independent Claim 42 recites a like distinction in terms of a method and thus similarly patently distinguishes over the prior art. Claims 43-44 are dependent on Claim 42 and thus include these limitations over the prior art. Independent Claims 45-48 include like limitations distinguishing over the cited art.

Dependent claims 3-5, 7-13, and 17-32 are directly or indirectly dependent on Claim 1 and thus are novel over the cited prior art for the same reasons already discussed for independent Claim 1. Furthermore the dependent claims recite further limitations that are neither taught nor suggested by the cited prior art. For example, Yourlo's discussion of a distance metric does not teach or suggest "computing a similarity matrix for the audio file" as claimed by the Applicants in claim 19. In contrast, Yourlo discusses computing a distance metric between two different pieces of music. (*See* Yourlo col. 4, lines 6-7; col 12, lines 11-16.) Also, Yourlo's illustration of distance between two pieces of music does not teach or suggest "visually displaying the musical works on a display device, in a manner illustrating relative similarities or dissimilarities" as claimed by the Applicants in amended Claims 30 and 41. Yourlo merely discusses selecting music based on results of comparison of extracted features. (*See* Col. 12, lines 44-50.) There is no discussion of how the results of the comparison would be visually displayed on a display device. Likewise Claims 14-15 and 33-34 depend from Claim 1 and follow the foregoing arguments. Claims 37 and 38 depend from Claim 35 and follow the above arguments regarding base Claim 35.

Therefore, separately or in combination, Yourlo, Hoory, Walker and Bloom do not teach or suggest the Applicants' claimed invention. Thus, none of the cited prior art alone or in combination makes obvious the Applicants' claimed method for determining similarity between a plurality of musical works.

As such the § 103(a) rejections of Claims 3-5, 7-15 and 17-48 are believed to be overcome.

Accordingly, the present invention as now claimed is not believed to be anticipated or made obvious from the cited art or any of the prior art. Removal of the rejections under 35 U.S.C. 102(e) and 35 U.S.C. 103(a) and acceptance of Claims 1-48 is respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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